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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,108	11/06/2001	Yilin Zhao	CS20045RL	6836

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EXAMINER

MULL, FRED H

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,108

Applicant(s)

ZHAO, YILIN

Examiner

Fred H. Mull

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 15-19 and 23 is/are allowed.
- 6) ☒ Claim(s) 6, 9-11 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 7-8 and 13-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on _____ is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Observations

1. The method steps in claims 1-11 and 13-14 are interpreted by the examiner as occurring wholly in the satellite positioning system receiver.
2. The preambles of all the claims are interpreted by the examiner as limitations to the respective claims.

Drawings

3. In the proposed drawing correction for Fig. 4, should "estimated altitude" in 420 say "estimated location"?

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9, 11, and 20-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant states in paper 10 dated September 25, 2003 that "3-dimensional estimated location" is different from "estimated location" (p. 11, lines 1-4). However, "3-dimensional estimated location" is not disclosed in the specification at all. The only

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reference to it appears to be in Fig. 4. However, in the figure, item 420 appears to associate “estimated location” with “derived altitude” and item 460 appears to associate “3-dimensional location” with “reference altitude”. But applicant states that “3-dimensional estimated location” is associated with “derived altitude” and that “estimated location” is associated with “reference altitude” (paper 10, p. 11, lines 4-7). As a result of the lack of disclosure of “3-dimensional estimated location” in the specification, and its use being referred to in contradictory ways elsewhere, one skilled in the art to which it pertains, or with which it is most nearly connected, would not be able to make and/or use the invention.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 6 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Fernandez-Corbaton.

In regard to claim 6, Fernandez-Corbaton discloses determining an estimated location of the receiver based on information received from a wireless communications network (col. 6, line 66 to col. 7, line 6); determining a reference altitude of the receiver based upon the estimated location of the receiver (col. 6, lines 54-56; col. 7, lines 18-23 and 35-38); and determining a new location of the receiver based upon the reference altitude (col. 7, lines 45-47).

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In regard to claims 10-11, Fernandez-Corbaton further discloses determining the new location at the receiver based upon the reference altitude of the receiver (col. 7, lines 36-47) and terrain slope information (col. 8, lines 53-55), where both the reference altitude and the terrain information is used in the chain of calculation to determine the new location.

All other previous rejections are withdrawn.

Allowable Subject Matter

6. Claim(s) 1-5, 15-19, and 23 is/are allowed.
7. Claim(s) 20-21 would be allowable if amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action, without the addition of new matter.
8. Claim(s) 9 and 22 would be allowable if amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action, without the addition of new matter, and if rewritten in independent form including all of the limitations of the base claim and any intervening claims
9. Claim(s) 7-8 and 13-14 is/are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. In regard to claim 6, applicant argues “The linearizing step of Fernandez-Corbaton is not the same as producing a second altitude ...”. (paper 10, p. 13, lines 1-2). However Fernandez-Corbaton states “Accordingly, if the altitude information is linearized, then the ambiguity can be resolved ...” (col. 7, lines 35-36, emphasis added). If linearizing the altitude gives back the exact same altitude as before, what is the point of linearizing it in the first place? Clearly, the post-linearization altitude is not the same as the pre-linearization altitude. Since they are different, we have a first pre-linearization altitude and a second post-linearization altitude.

To summarize Fernandez-Corbaton determines an estimated location, which he calls the “initial estimate” (col. 6, lines 55-56 and 63-66), which leads to a reference altitude (col. 6, lines 54-56; col. 7, lines 18-23 and 35-38), which then leads to a new location, which he calls the “approximate solution” (col. 7, lines 45-47).

In regard to claim 10, applicant admits “Fernandez-Corbaton uses terrain slope to estimate altitude” (p. 14, lines 7-9), but argues that “Fernandez-Corbaton does not determine the new location at the receiver based upon the ... terrain slope information” (p. 14, lines 4-6). This estimated altitude that applicant refers to is used in the linearization step to produce the reference altitude, which is then used to determine the new location. The new location is based on the terrain slope, since that information is used in the chain of steps that determines the new location. Thinking of it in terms of an equation or a system of equations, the terrain slope variable needs to be inputted in order for the new location to be calculated. Since the terrain slope is needed to

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calculate the new location, it is fair to say that the new location is “based upon” the terrain slope.

In regard to claim 11, applicant states “Fernandez-Corbaton linearizes an estimated altitude around an initial estimate of the user’s position. This is not the same as determining a reference altitude based upon an estimated location of the receiver” (p. 14, lines 21-23). This appears to be the same argument as with regard to claim 6. First an initial position estimate is used which leads to an altitude determination. This ultimately leads to a position determination. The previous steps and inputs to those steps are necessary in the chain of events/equations that lead to the subsequent events/calculations. If a quantity is calculated ultimately from a set of equations that requires a certain input, it can be said that the quantity is “based upon” that input (as well as other inputs).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

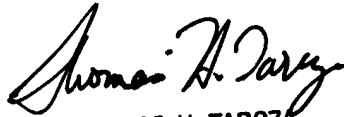
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 703-305-1250. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 703-360-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Fred H. Mull
Examiner
Art Unit 3662

fhm


THOMAS H. TARCZA
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